REMARKS

Applicants have amended claims 1, 18 and 22. Claims 1-23 are pending in the application. Claim 1 has been amended to call for the stud to plate tie connection to be in a wall, and to positively claim engagement between the face members of the connectors and the base and top plates. Claim 18 has been amended to positively claim the underlying structural member. Claim 22 has been amended to include antecedent basis for the reinforcing embossments.

This amendment contains no new matter. Entry of this amendment is respectfully requested.

Drawings

The examiner has checked drawings on the Office Action Summary sheet, but has neglected to check whether the drawings are accepted or objected to. Applicants respectfully request clarification of the examiner's determination as to the drawings.

Claim Rejections and Objections – 35 USC § 112

Claim 22 has been amended to positively claim "reinforcing embossments," providing antecedent basis for the limitation "said reinforcing embossments."

Claim Objections

Claims 18-21 are intended to add both method and apparatus elements to the claims. Claim 18 has been amended to positively claim the underlying structural member. As such, claim 18 adds the underlying structural member as well as the step of driving part of the first connector between the base plate and the underlying structural member. Claim 18 combines the apparatus of claim 1 (from which the method claim 17 directly depends) and the method of claim 17 (from which claim 18 depends) with the additional method and apparatus elements of claim 18. As such, Applicant does not believe that claims 18-21 require further amendment. It would be possible for claim 17 to be amended to include all the apparatus of claim 1 and thereby stand as an independent method claim, but Applicant does not believe that such an amendment is necessary.

Claim Rejections – 35 USC § 102

The Examiner has rejected claims 1-3 and 15 under 35 USC Section 102(b) as being anticipated by U.S. Patent No. 5,259,685 Gilb.

Applicant agrees that Gilb may disclose connectors and connections that have some elements that are analogous to the present invention. In FIG. 3, Gilb at most might disclose the following elements of claim 1 of the present application (which Applicant does not concede), but even this expansive reading ignores the specific limitations discussed at length below:

1. a stud to plate tie connection in a wood frame structure comprising:

a. a base plate having an upper face, a lower face, and an edge face;

b. a second structural member having an upper face, a lower face, and an edge face;

c. an elongated stud having sides and an edge face therebetween, having a lower end in abutting registration with the upper face of the base plate;

d. a first stud to plate tie connector having:

i. an edge member;

ii. a face member connected to said edge member and projecting at a right angle thereto;

iii. a plurality of fasteners passing through the edge member into the edge face of the stud and into the edge face of the base plate;

e. a second stud to plate tie connector having:

i. an edge member;

ii. a face member connected to said edge member and projecting at a right angle thereto.

The elements of claim 1 that are paraphrased above specifically do not include the top plate, the abutting registration between the upper end of the elongated stud and the lower face of the top plate, the engagement between the face member of the first connector and the lower face of the base plate, the fact that there are two identical

connectors, and the engagement between the face member of the second connector and the upper face of the top plate.

Although the Examiner asserts that Gilb discloses an elongated wall stud "having an upper end in abutting registration with said lower face of said top plate," as called for in claim 1, it is not clear to Applicant that this is the case. In FIG. 3 of Gilb, the long outward-facing wall does not have top plate. The wood member attached to the ends of the rafters appears to be part of the roof structure. Furthermore, even if one does not make that distinction, the wood member attached to the ends of the rafters is angled with the rafters, so that only an edge is in contact with the wall studs. The wall studs of Gilb are not in abutting registration with the lower face of that wood member, even if it is interpreted as a top plate. The short outward-facing wall in FIG. 3 of Gilb might be taken to show a top plate in the portion removed from the wall, but if it does, that top plate does not rest on the studs, but is instead held between them.

The Examiner has used FIG. 24 of Gilb to refer to all the cited parts, but Applicant completely disagrees with the Examiner's characterizations of the parts. Gilb states, at column 8, lines 33-39, that FIG. 24 illustrates a log holder, which is a piece of furniture. Log holders, generally speaking, do not have top plates, studs and base plates. Furthermore, the Examiner has turned the log holder on its side in order to create a top plate, stud and base plate. The Examiner has labeled one of the upright leg members of the log holder as a "top plate," a horizontal member (which would support the held logs) as an "elongated stud," and a second upright leg member as a "base plate." Aside from the fact that FIG. 24 of Gilb illustrates a piece of furniture that does not have a top plate, a stud, or a base plate, the Examiner's ad hoc rotation of the structure ignores the fact that the piece of furniture would bear gravity loads parallel to what the Examiner has labeled the top and base plates against what the Examiner has labeled the stud. This is orthogonal to the orientation of a stud-to-plate connection, in which the stud stands on the base plate, the top plate rests on the stud, and the gravity load is parallel to the stud. Finally, the corner connector of Gilb is designed specifically to transfer loads from horizontal members to horizontally-adjacent vertical members, not from horizontal members to vertically-adjacent vertical members, and therefore teaches away from the connector of the present invention. In sum, FIG. 24 of Gilb does not teach a stud-to-plate connection, neither alone nor when considered together with the written description. Furthermore, Applicant has amended claim 1 to call for the stud to plate tie connection to be "in a wall." As explained in the first sentence of the description, in the Background of the Invention, the present invention contemplates "the connection of the vertical wall framing studs."

Taking Gilb as a whole, although it discloses a connector with a face member connected to the edge member and projecting at a right angle thereto, the face member of Gilb is not used "for engaging said lower face of said base plate," as called for in claim 1. None of the several connectors and connections illustrated in Gilb show a face member engaging the lower face of a horizontal member. The connector of Gilb is

always shown with an edge member that projects beyond the face member, making it impossible to install the connector of Gilb with its face member engaging the lower face of a base plate without having the edge member projecting below the bottom of the base plate. While it might be possible to do this, Gilb doesn't teach such an installation, in which the edge member would serve no useful function.

Although Gilb discloses the use of multiple connectors, Gilb does not teach the use of two identical connectors used to connect a stud to both a top plate and a base plate. In particular, Gilb does not show a connector "engaging said upper face of said top plate" as called for in claim 1 of the present application. As detailed above, Gilb does not show a connector "engaging said lower face of said base plate."

Finally, if one takes the short outward-facing wall in FIG. 3 of Gilb to show a top plate in the portion removed from the wall, the connector that joins the stud to the top plate is "a rigid angle 96" (Gilb, column 16, line 42) that does not have "a plurality of fasteners passing through said edge member into said edge face of said stud and into said edge face of said top plate," as called for in claim 1 of the present application. The rigid angle 96 is attached to the lower face of the putative top plate of Gilb and to one of the side faces of the putative stud.

In conclusion, Applicant asserts that Gilb does not anticipate claim 1 of the present application. Furthermore, since claim 1 is the sole independent claim of the present application, Gilb cannot, by definition, anticipate any of the dependent claims, including 2, 3 and 15. With respect to claim 3, the shortcomings of Gilb detailed above (in particular the lack of corresponding top and base plates) make it unlikely, if not impossible, that the fastener openings of Gilb would be aligned as described in claim 3. Claim 15 depends directly from claim 3 and adds visual indicia that are not taught by Gilb.

Claim Rejections and Objections – 35 USC § 103

The Examiner has rejected claims 4 and 17-21 under 35 USC Section 103(a) as being unpatentable over U.S. Patent No. 5,259,685 Gilb.

Regarding claim 4, the Examiner states that "[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to use the same number of fasteners, since it has been held that a mere duplication of the essential working parts of a device involves only routine skill in the art to increase the connection of the stud plates." Applicant believes that the Examiner is stating that calling for the same number of fasteners to connect each of the two connectors to the stud is "mere duplication." Applicant respectfully objects. Claim 4 does not call for the two connectors to be attached to the stud with the same number of fasteners. Instead, it calls for a minimum of four fasteners to connect each of the two connectors to the stud, which implies that the maximum number of fasteners can be different for the two

connectors. Furthermore, the minimum number of four fasteners in each is something that can only be achieved with a properly dimensioned connector when the top plate is double and the base plate is single.

Regarding claim 17, the Examiner states that "[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to build the assemble (*sic*) the components as claimed in this application, since placing the frame members together, placing connecting plates on joints, and fastening the plates is common in the art of frame building." Again, Applicant respectfully objects. Claim 17 is a method of forming the connection described in claim 1. As detailed above, Gilb does not teach the elements of claim 1. Gilb cannot, therefore, make a method of forming the connection of claim 1 obvious.

Regarding claims 18-21, Applicant has amended claim 18 to positively claim the underlying structural member. Gilb does not disclose an underlying structural member and does not teach the stud to plate tie connection of the present application. It would not be obvious to one having ordinary skill in the art to combine two things that Gilb does not teach and thereby make claims 18-21 obvious.

The Examiner has rejected claims 5-10 under 35 USC Section 103(a) as being unpatentable over U.S. 5,259,685 Gilb in view of U.S. Patent No. 1,486,509 Whittaker.

Regarding claims 5-7, Applicant concedes that Whittaker discloses embossments in two members that are analogous to those of the connector of the present invention, embossments that are connected and continuous. However, claims 5-7 depend from claim 1, which as detailed above is not anticipated by Gilb.

Regarding claims 8 and 9, Applicant does not mean to imply that double plates are new to the art of light frame construction. Double plates are absent from Gilb, but they do exist elsewhere in the prior art. However, Applicant notes that double top plates are not merely stronger; they are continuous because the wood members are lapped. The bottom plate can be discontinuous because it is directly supported by the underlying structural member and are bolted to it. Again, claims 8 and 9 depend from claim 1, which as detailed above is not anticipated by Gilb. The Examiner appears to be asserting that claim 8 calls for both the top and bottom plates to be doubled. The Applicant would like to point out that claim 8 requires that only one of the top and bottom plates be doubled.

Regarding claim 10, the Examiner states that "Gilb discloses the edge member of the plate as being substantially as wide as the stud edge face (marked fig. 24)." As argued above, Applicant believes that FIG. 24 of Gilb does not show a stud as defined by the present application. Claim 10 depends from claim 1, which as detailed above is not anticipated by Gilb.

The Examiner has rejected claim 16 under 35 USC Section 103(a) as being unpatentable over U.S. Patent No. 5,259,685 Gilb in view of U.S. Patent No. 2,413,362 Maxwell.

Regarding claim 16, the Examiner states that "[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Gilb by adding a second type of hole, as disclosed by Maxwell, in order to save materials, weight, and costs." Firstly, the second type of hole 12, as disclosed by Maxwell is "for the purpose of permitting nails to be driven through the clip" (Maxwell, column 6, lines 6-7) and are "sufficiently large so that it is a simple matter to so position nails . . . that they will pass through these openings." (Maxwell, column 6, lines 13-15). The second type of hole disclosed by Maxwell is not a visual indicator, and neither Gilb nor Maxwell disclose connectors that have any use for visual indicia. Secondly, the fact that the second type of hole disclosed by Maxwell may save materials, weight and costs seems to be irrelevant. Neither Gilb, Maxwell nor the present application say anything about saving material, weight and costs by using holes like the second type of hole disclosed by Maxwell. Claim 16 depends from claim 1, which as detailed above is not anticipated by Gilb.

The Examiner has rejected claims 22 and 23 under 35 USC Section 103(a) as being unpatentable over U.S. patent No. 5,259,685 Gilb in view of U.S. Patent No. 2,413,362 Maxwell in further view of U.S. Patent No. 1,486,509 Whittaker.

Regarding claim 22, Applicant concedes that Whittaker discloses embossments in two members that are analogous to those of the connector of the present invention, embossments that are connected and continuous, and which extend at least as far from the face member as one of the fastener openings in the edge member. However, claim 6 depend from claim 1, which as detailed above is not anticipated by Gilb.

Regarding claim 23, the Examiner states that "Applicant fails to show criticality for specifically claimed dimensions, therefore it would have been an obvious design choice to use the dimensions such as specified in these claims." Applicant would like to point out that the abstract of the present application states that "[t]he face member serves the dual purposes of locating the connector at the ends of the studs and of resisting tension forces." Furthermore, paragraph 3 of the description goes on to point out that the prior art connectors do not "provide tension resistance in addition to that provided by the fasteners with the same part used for indexing," and paragraph 5 of the description states that the connectors of the present invention "resist tension loads through fasteners and a face member flange." Because the face member flange resists tension, it must be large enough to effectively engage the top and base plates, and a certain threshold is called for in claim 8.

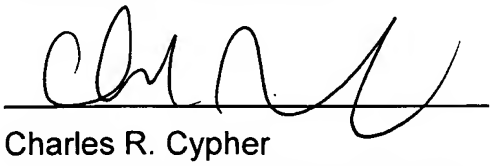
In conclusion, Applicant asserts none of the claims 4-10 and 16-23 is obvious in view of Gilb in further view of the additional cited prior art.

Conclusion

In view of the above, Applicant submits that the claims remaining in the application are in condition for allowance and allowance of the claims at an early date is solicited.

Please direct any calls in connection with this application to the undersigned at (510) 832-4111.

Respectfully submitted,



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Attachments: Petition for Extension of Time